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Protecting and Restoring the Santa Barbara Channel and Its Watersheds
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April 14, 2006

Dwight E. Sanders
California State Lands Commission
Div. of Environmental Planning & Management
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Re: Revised Draft EIR for Cabrillo Port Liquified Natural Gas Deepwater Port
State Clearinghouse number: 2004021107

Dear Mr. Sanders:

Santa Barbara Channelkeeper is a non-profit environmental organization dedicated to protecting and restoring the Santa Barbara Channel and its watersheds through citizen action, education and enforcement. Channelkeeper has reviewed the Revised Draft Environmental Impact Report (EIR) for the Cabrillo Port Liquified Natural Gas (LNG) Deepwater Port, and we find it does not adequately address the numerous impacts to water quality that could result from the proposed project.

Before commenting directly on the water quality impacts of the proposed project, Channelkeeper notes that there are some omissions and inaccuracies associated with the environmental and regulatory settings as laid out in the water quality section. For one, the water quality parameters of ocean waters in the project vicinity as described in Table 4.18-1 include estimates of dissolved oxygen concentrations that are more than 10 years old and thus likely present an inaccurate picture of dissolved oxygen concentrations today. Secondly, the marine sediment section (at 4.18-6) claims that the US Environmental Protection Agency is currently planning a removal action associated with the massive mountain of toxic slag situated on the site of the now-defunct Halaco Engineering Company metal recycling facility. Channelkeeper has been engaged in a legal battle with Halaco for more than four years and knows of no such plan. The more detailed explanation of this situation in the Land Use Section of the EIR states that "Halaco has accepted a $2.5 million offer to sell its plant and surrounding land to the Lawrence Welk Group.... The Coastal Conservancy will work on a restoration plan that includes the Halaco property" (4.13-4). That deal subsequently fell through, and therefore the information pertaining to the Halaco property is no longer accurate. These two items must be updated to reflect current conditions.

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G201-1
Table 4.18-1 includes updated dissolved oxygen data.

G201-2
Sections 4.13.1 and 4.18.1.2 contain updated information from the USEPA about the Halaco facility.

As noted in the description of the environmental setting, several impaired waterbodies are located in the project area, including Ormond Beach, the Santa Clara River and Calleguas Creek. The Regional Water Quality Control Board will soon be developing Total Maximum Daily Loads (TMDLs) that set a maximum load of the impairing pollutant(s) that can be discharged from all sources into the impaired waterbody without exceeding water quality standards. It is possible that TMDLs will be adopted for the impaired waterbodies in the project area by the time construction begins on the proposed project. As such, the EIR must acknowledge that adoption of TMDL requirements may require revisions of the project's permits, discharge limitations or Best Management Practices (BMPs) to comply with any TMDLs put in place.

While the regulatory setting section outlines major laws, regulatory requirements and plans for water quality and sediments in Table 4.18-8, in many areas the EIR fails to state explicitly that the Applicant intends to comply with all of these requirements. For example, the Table includes a reference to Annex V of MARPOL's prohibition against the dumping of garbage into the ocean, yet nowhere does the EIR affirm that the FSRU or associated LNG carriers or supply vessels will comply with this prohibition by retaining all garbage on board and disposing of it at appropriate onshore facilities. Clearly the FSRU and associated vessels will generate some amount of garbage on board, and therefore must commit to complying with applicable regulations prohibiting the dumping of garbage. This same comment applies to the lack of an explicit commitment to comply with the International Convention on the Control of Harmful Anti-fouling Systems on Ships.

Temporary Degradation of Offshore Water Quality due to Accidental Discharges

The EIR asserts that accidental discharges of petroleum, sewage or other contaminants from vessels during offshore construction and installation activities could temporarily degrade offshore water quality. It suggests that only "small" spills might occur and "would be anticipated to be small and infrequent." This is an assumption for which no basis or parameters are provided; large and/or frequent spills may occur as well and may be significant and therefore must be addressed in the EIR and mitigated if significant.

The above comment also applies to the potential degradation of water quality from discharges of gray water or untreated sewage from construction and supply vessels. No basis is provided for the EIR's assertion that "any accidental discharge of untreated sewage would be unlikely or infrequent.... [and] would be in relatively small amounts and in the open ocean it would dissipate rapidly" (4.18-22). Furthermore, the EIR ignores the likelihood, frequency and potentially significant water quality impacts of gray water discharges. Analyses of gray water from naval vessels have demonstrated that gray water often contain contaminants such as detergents, cleaners, oil and grease, metals, pesticides, nutrients, dissolved plastics, and medical and dental waste, as well as significant concentrations of priority pollutants.[1] Recent sampling of cruise ship gray water in Alaska has shown that it also contains extremely high levels of fecal coliform bacteria and total suspended solids, as well as elevated levels of ammonia, chlorine,

[1] US Navy Naval Sea Systems Command and US EPA Office of Water. Technical Development Document: Phase I, Uniform National Discharge Standards for Vessels of the Armed Forces.

G201-3

G201-4

G201-5

G201-6

G201-3
As stated in Section 4.18.2, the Applicant would have to adhere to TMDL requirements.

G201-4
As stated in response to Comment G201-3, the Applicant or its designated representative would have to comply with all International, Federal, state, and local laws and regulations for construction and operations, including MARPOL Annex V.

Procedures for compliance with Federal, state, and local laws and regulations, including MARPOL 73/78, must be thoroughly documented in the deepwater port operations manual. The port cannot commence operations until the USCG has reviewed and approved the operations manual.

G201-5
Impact WAT-1 in Section 4.18.4 has been revised and contains additional information about the determination of the size of spills discussed.

G201-6
Section 2.2.2.6 and Impact WAT-5a in Section 4.18.4 have been revised to provide a more detailed explanation of discharges of treated black water from the FSRU. A USCG-approved Marine Sanitation Device (MSD) on the FSRU would use a sewage digester to reduce the black water volume. The MSD would generate approximately 85 to 90 gallons per day of treated black water and 55 to 60 gallons of sludge per day. The sludge would be packaged and transported offshore for proper disposal. The monthly discharge of treated black water would not exceed 2,642 gallons per month under the FSRU's NPDES permit.

The document assumes that the Applicant would operate the equipment on the FSRU correctly and must comply with the stipulations of the NPDES permit. Any release of black water in excess of the NPDES permitted quantities would result in a violation.

Section 2.2.2.6 and Impact WAT-5a in Section 4.18.4 discuss gray water treatment on board the FSRU. Approximately 2,625 gallons of treated gray water would be discharged per week. "The gray water would be treated using filtration to separate particulate matter and UV oxidation to destroy dissolved organic materials. Discharge of treated gray water to the ocean would be in accordance with a facility-specific NPDES permit issued by the USEPA." Discharges would be estimated based on the requirements of the NPDES

permit; therefore, it is unlikely that discharges would not meet the NPDES standards.

Impacts WAT-1 and WAT-5a in Section 4.18.4 have been revised and contain additional information about the impacts of discharges of gray water and black water.

copper, nickel and zinc that often exceed water quality standards.[2] Because the water quality significance criteria include violations of federal, state or local water quality standards, this impact could be significant and would thus require mitigation. Channelkeeper does not understand how "the prevention and response activities in the required Facility Response Plan and SPCC Plans would reduce this impact to below its significance criteria" (4.18-23) when these plans pertain specifically to the prevention of oil pollution from a facility such as the FSRU and not other discharges such as sewage or gray water. These potentially significant impacts must be more thoroughly and accurately addressed in the EIR.

Short-Term Increase in Turbidity or Accidental Unearthing of Contaminants during Offshore Construction

The EIR states that, "During installation of the FSRU and pipeline, approximately 10 acres (4 hectares) of seafloor would be temporarily disturbed .... [which] could degrade water quality because of an increase in turbidity or resuspension of contaminated sediments. The temporary increase in turbidity could reduce light penetration, discolor the ocean surface, alter the ambient water chemistry such as pH and dissolved oxygen content, or interfere with filter-feeding benthic organisms sensitive to increased turbidity. The effects on water quality would be short-term and highly localized and therefore considered less than significant" (4.18-23). Again, no basis or parameters are provided for the assertion that impacts would be short-term and highly localized, and regardless, would not be less than significant because it would exceed two significance criteria and thus require mitigation.

The EIR goes on to state that "some sediments may be contaminated with pollutants… However, there are no known locations of contaminated sediments at the mooring turret, along the subsea pipeline route or near Ormond Beach, and therefore there is no anticipated release of pollutants (see Section 4.12, "Hazardous Materials")" (4.18-23). No studies are referenced to indicate that due diligence was done to substantiate the presence or absence of contaminated sediments. The reference to the Hazardous Materials section simply demonstrates that sediment was sampled by the Applicant from the HDB exit hole location (4.12-2), as opposed to sampling along the entire length of the pipeline route. Further information must be provided before the determination can be reliably made that no release of pollutants could be anticipated.

More information must also be provided about the increase in turbidity to be caused by anchor embedment. The EIR fails to specify the length of time this "anchor embedment period" would last and as such, how long the resultant increase in turbidity would near the seafloor would last; without this information, no determination can be made with regard to the significance of this impact. Similarly, information about the length of time required to lay the subsea pipeline must also be provided to substantiate the claim that the suspension of sediments and turbidity therefrom would not have a significant impact on water quality (4.18-24).

Channelkeeper is concerned about the potentially significant water quality impacts associated with releases of drilling fluids, and our concerns are not allayed by the EIR's conjectural

[2] Alaska Cruise Ship Initiative, Interim Report, September 2000; and ADEC Commercial Passenger Vessel Environmental Compliance Program, Assessment of Cruise Ship and Ferry Wastewater Impacts in Alaska, January 2004.

G201-6 Continued

G201-6
Continued

G201-7

G201-8

G201-9

G201-10

G201-6 Continued

G201-7
Impact WAT-2 in Section 4.18.4 contains revised text addressing the conclusions with respect to turbidity.

G201-8
Section 4.18.1 contains revised information on the location of contaminated sediments and the relationship between such location and proposed Project activities.

G201-9
Impact WAT-2 in Section 4.18.4 has been revised to contain additional information on the length of time that turbidity would be anticipated to be elevated due to construction. Tables 2.5-1 and 4.3-2 provide the duration of FSRU mooring and offshore pipeline construction.

G201-10
Impact WAT-2 in Section 4.8.4 has been updated to clarify the conclusions about the release of drilling fluids at the HDB exit holes.

assertions that the extension and dispersion of drilling fluid into water column "is more likely to occur in deeper water associated with oil and gas drilling" (4.18-24) or that for the proposed project, the temperature differential between the drilling fluid moving through "relatively" shallow formations under the sea floor is "likely" to be similar to that of seawater. Further, the use of an HDB suction pump with sufficient capacity to withdraw "the majority" of drilling fluid is not sufficiently quantified (all at 4.18-24). This, coupled with the vague mention of stationing divers at the site to vacuum released drilling fluid, does not provide a sufficient basis to support the claim that no significant impact to water quality would result.

Short-Term Degradation of Surface Water or Groundwater Quality due to Accidental Release of Drilling Fluids

As in many other instances throughout the water quality impacts analysis, the EIR suggests that impacts from releases of drilling fluids could *temporarily* reduce water quality but that this reduction would not be a significant impact (4.18-25). For clarity, the length of time and significance criteria for "temporary" or "short-term" degradation must be defined precisely so that potential impacts can be accurately depicted and assessed.

Channelkeeper finds that the Drilling Fluid Release Monitoring Plan as described (4.18-25 and Appendix D1) will not do much to minimize the potential for releases of drilling fluid as stated in the EIR, but rather simply lays out plans for monitoring and clean up after a release has already occurred, and as such, does not constitute sufficient mitigation. Moreover, the Plan outlines only "measures that *may* be used" once loss of drilling fluid returns exceed 40 percent (Appendix D1 at 18) or where dye or drilling fluid is detected based on Condition 1, 2 or 3 monitoring protocols (Appendix D1 at 20); there is no assurance that these measures *will* be used, nor information provided on how or who will make these decisions.

Short-Term Increase in Erosion due to Construction Activities

While erosion and sedimentation are the most common and problematic impacts on water quality from construction activities, Channelkeeper notes that there are several other construction-related pollutants that could potentially degrade water quality, including solid and sanitary wastes, phosphorous, nitrogen, pesticides, oil and grease, concrete truck washout, construction chemicals and construction debris.[3] The EIR must examine and satisfactorily demonstrate that no significant impacts from these additional construction-related pollutants will occur as a result of the proposed project.

The EIR notes that if hydrostatic testing water is discharged to land, certain BMPs would be implemented. It is impossible to ascertain from the simple yet oddly numbered list of BMPs ("BMPs 1-01 through 1-08, 'Sediment Controls,' BMP 3-01 'Dewatering Operations,' and BMP 4-01 through 4-08, 'Erosion and Soil Stabilization'") whether these will be sufficient to protect water quality. A more detailed description of these activities, rather than a numbered list referring to an unappended document (Sempra 2002), is necessary to make that determination.

[3] US Environmental Protection Agency, "Storm Water Phase II Final Rule: Construction Site Runoff Control Minimum Control Measure." EPA 833-F-008, Fact Sheet 2.6, January 2000.

G201-10 Continued

G201-11

G201-12

G201-13

G201-14

G201-10 Continued

G201-11
Section 4.1.4 defines "temporary" and "short-term" as follows:
Temporary - returns to baseline conditions after the activity stops; and
Short-term - returns to baseline conditions on its own within one year of the activity.

G201-12
Impact WAT-3 in Section 4.18.4 contains additional information on the measures that would be implemented to reduce the potential for a release of drilling fluids. Because the Applicant would use HDB instead of HDD, the spill potential would be reduced. As discussed in Section 2.6.1, "The main difference between HDB and HDD is that in the HDB methodology a pump, located near the drill head, is used to return excess drilling fluid and cutting spoils back to the drill rig for separation and recycling. As a result, drilling can occur using lower drilling fluid pressure, which minimizes or eliminates the risk of these fluids escaping into the surrounding formation or to the surface." Therefore, the use of HDB, in and of itself, would reduce the potential for drilling fluid releases.

The Drilling Fluid Release Monitoring Plan (Appendix D) is both a monitoring and response plan. Sections 4.1.2, 4.1.3, and 4.1.4 of the Plan describe the monitoring methods; including visual inspection, use of tracer dye, sampling, and divers; that would be used to ensure that no release has occurred. Section 5 of the Plan describes the procedures that would be undertaken if any release is suspected. Section 6 describes in detail the different operating conditions and monitoring methods for each. Section 7 describes the HDB drilling clean-up procedures. The Applicant is responsible for implementing the Plan; however, the CSLC would monitor all aspects of the Plan.

G201-13
As stated in Table 4.18-8, "[t]he State of California has adopted a general storm water permit covering nonpoint source discharges from certain industrial facilities and from construction sites involving more than one acre. The Construction General Permit requires preparation of a storm water pollution prevention plan (SWPPP) and implementation of best management practices (BMPs) to reduce the potential for pollutants (chemicals and sediment) to be discharged from the construction site to waters of the State."

As indicated, the Applicant would be required under permit to reduce the potential for pollutants to be discharged during construction. To minimize the potential release and migration of contaminants, the Applicant has incorporated erosion control during construction (AM TerrBio-1a). In addition, the following mitigation measures would minimize the potential release and migration of contaminants during construction: a drilling fluid release monitoring plan (MM WAT-3a), a strategic location for drilling fluids and cuttings pit (MM WAT-4a), monitoring of stream crossing during construction (MM WAT-4c), and backfilling, compaction, and grading following construction (MM GEO-1b).

G201-14
Section 2.7.1.8 and Impact WAT-4 in Section 4.18.4 have been revised. Hydrostatic test water from onshore pipe testing would not be discharged to land; instead, it would be containerized and then discharged at a publicly owned treatment works (POTW) in accordance with Federal, State, and local regulations.

Further, Channelkeeper questions how and where (e.g., on site?) such water would be tested prior to discharge, and to what NPDES permit discharge requirements it will be compared to determine compliance.

Degradation of Water Quality due to Accidental Release of Untreated Gray Water, Deck Drainage, and Other Discharges that Do Not Meet Water Quality Standards

The EIR's estimate of the volume of blackwater to be generated aboard the FSRU is far too low. Estimates from the US Navy and EPA indicate that blackwater is generated at a rate of between 5-10 gallons per person per day.[4] From the FSRU only, this would equate to 150-300 gallons per day or 54,750-109,500 gallons per year. The use of a Marine Sanitation Device (MSD) is indeed required, yet extensive sampling of cruise ship blackwater discharges in Alaska have demonstrated that MSDs routinely fail to function properly and consistently generate effluent with fecal coliform counts and levels of total suspended solids thousands of times greater than the federal standards allow (200 fecal coliform colonies per 100 ml and 150 mg/l of total suspended solids, see 40 CFR 140). Treated blackwater samples also showed consistently high concentrations of ammonia, copper, nickel, zinc, and chemical oxygen demand (COD).[5]

Moreover, the EIR must also consider the impact of considerable additional volumes of blackwater (and other liquid wastes such as gray water, bilge water and deck drainage) from all the additional LNG carriers and supply vessels which will be traveling to and from the FSRU and which could cumulatively have significant detrimental impacts to water quality and therefore would require mitigation.

The EIR fails to explain how gray water would be treated prior to discharge. As described in greater detail above, gray water has been proven to contain numerous contaminants.[6] It states that "the FSRU could accidentally release gray water or contaminated deck drainage before it is treated adequately to meet water quality standards and the conditions of the NPDES permit. In addition, accidental spills of materials used on the FSRU could occur" (4.18-31). Because the significance criteria include violations of federal, state or local water quality standards, this impact *would* be significant and must therefore be mitigated.

With regard to storm water, the EIR claims that all rainwater and deck washdown water would be allowed to flow off the FSRU unimpeded, except in areas where it could be contaminated with oil. Unfortunately, the EIR fails to identify what areas those are and how much surface area they cover. While it refers to secondary containment for these areas, the EIR fails to state

[4] Presentations by US Navy and US EPA representatives at Pacific States/British Columbia Oil Spill Task Force Roundtable, "On Board with Cruise Ship Pollution Prevention," January 21, 2004, San Diego, CA, at http://www.oilspilltaskforce.org/docs/meeting_notes/SummaryNotesCruiseshipRt2.pdf.
[5] Science Advisory Panel & Alaska Department of Environmental Conservation (ADEC) Commercial Passenger Vessel Environmental Compliance Program, The Impact of Cruise Ship Wastewater Discharge on Alaska Waters, November 2002; and ADEC Commercial Passenger Vessel Environmental Compliance Program, Assessment of Cruise Ship and Ferry Wastewater Impacts in Alaska, January 2004.
[6] US Navy Naval Sea Systems Command and US EPA Office of Water. Technical Development Document: Phase I, Uniform National Discharge Standards for Vessels of the Armed Forces; and Alaska Cruise Ship Initiative, Interim Report, September 2000; and ADEC Commercial Passenger Vessel Environmental Compliance Program, Assessment of Cruise Ship and Ferry Wastewater Impacts in Alaska, January 2004.

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G201-18

G201-14 Continued

G201-15
Section 2.2.2.6 and Impact WAT-5a in Section 4.18.4 have been revised to provide a more detailed explanation of discharges of treated black water from the FSRU. A USCG-approved Marine Sanitation Device (MSD) on the FSRU would use a sewage digester to reduce the black water volume. The MSD would generate approximately 85 to 90 gallons per day of treated black water and 55 to 60 gallons of sludge per day. The sludge would be packaged and transported offshore for proper disposal. The monthly discharge of treated black water would not exceed 2,642 gallons per month under the FSRU's NPDES permit.

The document assumes that the Applicant would operate the equipment on the FSRU correctly and must comply with the stipulations of the NPDES permit. Any release of black water in excess of the NPDES permitted quantities would result in a violation.

G201-16
Impacts WAT-1 and WAT-5a in Section 4.18.4 have been revised to include additional discussion of black and gray water discharges, deck drainage, and bilge water for both the FSRU and Project support and construction vessels.

G201-17
As discussed in Section 2.2.2.6, "[g]ray water (from showers and sinks) would be collected for onboard treatment. Assuming that each of the permanent crew of 30 personnel used approximately 90 gallons (0.34 m^3) per day, the total volume of gray water would be approximately 2,700 gallons (10.2 m^3) per day or 985,500 gallons (3,730 m^3) annually. The gray water would be treated using filtration to separate particulate matter and UV oxidation to destroy dissolved organic materials. Discharge of treated gray water to the ocean would be in accordance with a facility-specific NPDES permit issued by the USEPA."

Since gray water discharge would have to meet the facility-specific NPDES permit, no further mitigation would be necessary.

G201-18
It is not possible to provide an exact estimate of the area or locations of those areas that could be contaminated with oil at this time because the final design has not been completed. With respect to secondary containment and the potential discharge of

liquids from secondary containment areas, the Applicant would have to comply with all applicable Federal, state, and local laws and regulations for construction and operations. The Applicant would also have to comply with RCRA, Oil or Hazardous Material Pollution Prevention Regulations for Vessels in 33 CFR 155, Oil Pollution Prevention regulations in 40 CFR 112, and its NPDES permit.

explicitly that secondary containment will be installed around all areas where stormwater or deck washdown water may come into contact with oil. This is an important measure that must be included in the proposed project. Further, the EIR states that water collected in secondary containment areas will be stored in tanks to be monitored for oil content, and "if determined to be clean," would be discharged directly to the ocean (2-29), without explaining how this determination is to be made and according to what standard. The Water Quality section, on the other hand, states that water within secondary containment areas unconditionally would be processed through an oil/water separator prior to discharge. In order to ensure no significant impacts occur, the EIR must state explicitly that no stormwater or deck washdown water from secondary containment areas will be discharged prior to processing through an oil/water separator whose effluent must not have an oil content in excess of 15 parts per million (ppm), as required by Annex I of the International Convention for the Prevention of Pollution from Ships (MARPOL), the federal Oil Pollution Act and associated regulations.

Additionally, there appears to be a discrepancy between the estimated volume of rain that would flow onto the FSRU; on page 2-29 the estimate is 30 gallons or 0.1 m^3 per minute, whereas on page 4.18-29 the estimate is 10 gallons or 0.04 m^3 per minute. This discrepancy must be clarified and the correct volume accurately portrayed and assessed.

In addition, the EIR fails to affirm that the proposed project will comply with Annex I of the International Convention on the Control of Harmful Anti-fouling Systems on Ships by ensuring that the FSRU and LNG carriers will not bear anti-fouling/biocide compounds on their hulls or external parts or surfaces, or will bear a coating that forms a barrier to such compounds leaching from the underlying non-compliant anti-fouling system.

Additional Impacts

Temperature: The EIR estimates that cooling water discharges from the FSRU will be 28.8 degrees Fahrenheit warmer than the ambient sea temperature (4.7-51). This will violate the State's Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) by exceeding the Plan's limitation that "the maximum temperature of thermal waste discharge shall not exceed the natural temperature of receiving water by more than 20 degrees Fahrenheit." As such, this impact exceeds the significance criteria by violating a state water quality standard or objective and by changing background levels of chemical and physical constituents, and therefore must be mitigated.

Accidental Discharges from Increased Vessel Traffic Associated with Proposed Project: The Water Quality and Sediments section of the EIR completely fails to assess the potentially significant impacts that could result from the substantial increase in shipping traffic associated with the proposed project. According to the Marine Traffic Section, the proposed project would employ numerous vessels in the installation of the mooring system, FSRU mooring and pipeline construction, and would further generate numerous LNG carrier trips (208-260 Transpacific transits and 416-468 transits per year each to and from Port Hueneme) as well as 52 round-trip tugboat transits and 156-182 round-trip LNG carrier crew vessels from Port Hueneme to the FSRU every year. Each and every one of these vessel trips increases the potential for significant

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G201-18 Continued

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Section 2.2.2.4 and Impact WAT-5a in Section 4.18.4 have been revised and contain an updated rainfall estimate and stormwater volume.

G201-20
The Applicant must comply with all applicable International, Federal, State and local laws and regulations. Table 4.18-8 lists the International Convention on the Control of Harmful Anti-Fouling Systems on Ships. January 1, 2008, is the anticipated effective date of implementation of this International Convention.

G201-21
The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. A closed loop tempered water cooling system, which recirculates water, would be used instead of a seawater cooling system, except during annual maintenance (four days for the closed loop tempered water cooling system, and four days for the Moss tanks when the inert gas generator [IGG] would be operating).

Because seawater would only be used as non-contact cooling water during these maintenance activities, the volume of seawater used would be greatly reduced. Seawater would also be used for ballast. Section 2.2.2.4 describes the proposed seawater uptakes and uses for the FSRU. Appendix D5 describes seawater intakes and discharges during Project operations, and Appendix D6 describes the closed loop water system and provides thermal plume modeling analysis of discharges from the backup seawater cooling system.

When either the backup seawater cooling system or the IGG are operating, the temperature of the discharged seawater would be elevated above ambient temperatures no more than 20°F at the point of discharge and would be 1.39°F at 300 m from the point of discharge during the worst case scenario. These thermal discharges would comply with the California Thermal Plan (see Sections 4.7.4 and 4.18.4 and Appendix D6).

G201-22
The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. The Applicant has reduced the number of LNG carriers

that would call on the FSRU annually from a maximum of 130 to a maximum of 99. As a result, the number of LNG carriers docking at the FSRU weekly would be reduced from an average of two to three per week to one to two per week. Since a crew vessel would meet each LNG carrier, the number of crew vessel trips to and from Port Hueneme would also change. See Section 4.3 for more information on this topic.

Impact WAT-5a in Section 4.18.4 has been revised and contains additional information about discharges from Project service vessels.

Impact WAT-5b in Section 4.18.4 has been revised and contains additional information about potential petroleum discharges from Project service vessels.

LNG carriers would be regulated under International and Federal regulations and would have to comply with those regulations.

impacts to water quality through discharges of petroleum, sewage, gray water, bilge water and deck washdown water, not to mention the additional impacts on air quality and marine biological resources. These additional vessel trips could result in significant degradation of water quality due to discharges of petroleum, blackwater, gray water and bilge water from LNG carriers or supply vessels and therefore must be addressed in the EIR.

Atmospheric Deposition of Air Pollutants

Another additional water quality impact that will result from the proposed project is that of atmospheric deposition of pollutants from air emissions due to the additional vessel traffic. As noted by the Environmental Defense Center in their December 20, 2004 comment letter, atmospheric deposition is a potentially significant source of nutrients and toxic contaminants to surface and coastal waters in the project area, as supported by a recent study by the Southern California Coastal Water Research Project in Santa Monica Bay.[7] This potentially significant water quality impact must be evaluated in the EIR.

This concludes Santa Barbara Channelkeeper's comments on the Revised Draft EIR for the Cabrillo Port LNG Deepwater Port. Based on the above analysis, we believe that the proposed project could have numerous significant impacts on water quality in the project area and that as laid out in the Revised Draft EIR, are not adequately evaluated, nor sufficient mitigation proposed. As required by both NEPA and CEQA, regulatory agencies and citizens must have all the information necessary to fully understand the array of potential environmental impacts of a proposed project on which to base the decision of whether or not to approve its implementation. As currently drafted, the Revised Draft EIR does not provide such a basis.

Thank you for your consideration of the above comments. Please feel free to contact us should you have any questions.

Sincerely,

Kira Schmidt
Executive Director
Santa Barbara Channelkeeper

[7] Letter from Environmental Defense Center to Lt. Ken Kusano and Cy Oggins regarding the Cabrillo Port Liquefied Natural Gas Deepwater Port Draft EIS/EIR, December 20, 2004, at 75-76; and Stolzenbach, KD, Lu, R, Xiong, C, Friedlander, S, Turco, R, Schiff, K, Tiefenthaler, L. (September 2001). Measuring and Modeling of Atrnospheric Deposition on Santa Monica Buy and the Santa Monica Bay Watershed. Final Report to the Santa Monica Bay Restoration Project.

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G201-22 Continued

G201-23

The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. Section 4.6.1.3 and Impact AIR-5 in Section 4.6.4 contain information on regulated air pollutant emissions and an updated analysis of vessel emissions. Project vessel emissions would result in a very minor contribution to region-wide atomospheric deposition.

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Your statement is included in the public record and will be taken into account by decision-makers when they consider the proposed Project.

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Kira, ED SBCK

Santa Barbara Channelkeeper is a non-profit environmental organization dedicated to protecting and restoring the Santa Barbara Channel and its watersheds through citizen action, education and enforcement. Channelkeeper finds that the EIR does not adequately address the numerous impacts to water quality that could result from the proposed project. G203-1

(Prior to CK, wkd as dir of env'l advocacy cmpn targeting pollution from ships)

EIR correctly notes that accidental discharges of petroleum, sewage, graywater or other contaminants from the FSRU as well as vessels during offshore construction and installation activities could temporarily degrade offshore water quality. However, the EIR provides no bases for its repeated assumptions that such spills would be small, infrequent and insignificant. The same applies to increases in turbidity or resuspension of contaminated sediments from installation of the FSRU and pipeline, and releases of drilling fluid into offshore and surface waters. These activities could have significant impacts on water quality and most are simply waved aside without adequate analysis, which is not acceptable. G203-2

The EIR's estimate of the volume of blackwater to be generated aboard the FSRU is too low. Estimates from the US Navy and EPA indicate that blackwater is generated at a rate of between 5-10 gallons per person per day, as opposed to the .3 gpd explained in the EIR. ~~This needs to be updated in the EIR~~. G203-3

Numerous studies have shown that graywater often contains numerous contaminants. The EIR fails to explain how gray water would be treated prior to discharge. It also states that inadequately treated gray water or contaminated deck drainage that fails to meet water quality standards could accidentally be released. Because the significance criteria include violations of federal, state or local water quality standards, this impact *would* be significant and must therefore be mitigated. G203-4

Channelkeeper notes that the Drilling Fluid Release Monitoring Plan will not do much to minimize the potential for ***releases*** of drilling fluid, as stated in the EIR, but rather simply lays out plans for monitoring and clean up after a release has already occurred. Moreover, the Plan outlines only "measures that *may* be used" once loss of drilling fluid returns exceed 40 percent or where dye or drilling fluid is detected based on certain monitoring protocols; there is no assurance that these measures *will* be used, nor information provided on how or who will make these decisions. ~~As currently drafted, this plan does not constitute sufficient mitigation.~~ G203-5 G203-6

G203-1
The EIS/EIR assumes that the Applicant would comply with all legal requirements; Section 4.18.2 lists regulations related to water quality. Secondary containment, discussed in Section 2.1, would significantly reduce the likelihood of an accidental cargo release. In addition, spills must be promptly reported and cleaned up.

G203-2
Impact WAT-1 in Section 4.18.4 has been revised and contains additional information about the basis of the size of spills. Impact WAT-2 contains additional information about turbidity and resuspension of sediments. Impact WAT-3 contains additional information about the release of drilling muds.

G203-3
Section 2.2.2.6 and Impact WAT-5a in Section 4.18.4 have been revised to provide a more detailed explanation of discharges of treated black water. A USCG-approved Marine Sanitation Device (MSD) on the FSRU would use a sewage digester to reduce the black water volume. The MSD would generate approximately 85 to 90 gallons per day of treated black water and 55 to 60 gallons of sludge per day. The sludge would be packaged and transported offshore for proper disposal. The monthly discharge of treated black water would not exceed 2,642 gallons per month under the FSRU's NPDES permit.

G203-4
"Wastewater Treatment and Discharge" in Section 2.2.2.6 contains information on gray water, which would be "treated using filtration to separate particulate matter and UV oxidation to destroy dissolved organic materials" and discharged in accordance with a facility-specific NPDES permit issued by the USEPA. Section 4.18.2 contains information on the regulations with which BHPB would comply to treat, discharge, and/or dispose of wastes and wastewaters. Section 4.18.4, specifically Impact WAT-5a, addresses the potential for such accidental discharges and concludes based on the analysis therein that this potential impact would be adverse but would be below the level of its significance criteria. Potential impacts on the marine environment from such discharges are discussed in Section 4.7.4.

G203-5
The proposed Project has been modified and Project pipelines would be installed beneath the shore using technology with horizontal directional boring (HDB) instead of horizontal direction drilling technology because HDB uses lower drilling fluid pressure, which minimizes or eliminates the risk of fluids escaping into the

surrounding formation or to the surface. The Drilling Fluid Release Monitoring Plan (Appendix D1) contains training and monitoring procedures to prevent releases of drilling fluid.

Section 4.18.4 Impact WAT-3 has been revised and contains additional information about the measures used to prevent a drilling fluid release.

G203-6
The implementation of the Drilling Fluid Release Monitoring Plan is a mitigation measure (MM WAT-3a). The lead Federal and State agencies share the responsibility to ensure that mitigation measures are implemented. Table 6.1-1 in Chapter 6 is the basis for the Mitigation Monitoring Program, which would be implemented, consistent with section 15097(a) of the State CEQA Guidelines, to ensure that each mitigation measure is incorporated into Project design, construction, operation, and maintenance activities.

While erosion and sedimentation are the most common impacts on water quality from construction activities, Channelkeeper notes that there are several other construction-related pollutants that could potentially degrade water quality, including solid and sanitary wastes, phosphorous, nitrogen, pesticides, oil and grease, concrete truck washout, construction chemicals and construction debris. ~~The EIR~~ must examine and satisfactorily demonstrate that no significant impacts from these additional construction-related pollutants will occur as a result of the proposed project. G203-7

Beyond the additional analyses needed to support or refute the EIR's claims that the above impacts will not be significant, there are additional water quality impacts that are completely unaddressed in the revised draft EIR. G203-8
The EIR estimates that cooling water discharges from the FSRU will be 28.8 degrees Fahrenheit warmer than the ambient sea temperature, which would violate the State Thermal Plan's limitation that "the maximum temperature of thermal waste discharge shall not exceed the natural temperature of receiving water by more than 20 degrees Fahrenheit." This impact therefore must be addressed and mitigated.

The EIR fails to address the potentially significant impacts that could result from the substantial increase in shipping traffic associated with the proposed project. Numerous vessels will be employed in the installation of the FSRU mooring and pipeline, as well as shipping LNG and supplies to the FSRU. Every additional vessel trip generated by the proposed project could result in significant degradation of water quality due to discharges of petroleum, blackwater, gray water and bilge water, as well as atmospheric deposition of pollutants from their air emissions, and these potential impacts must be addressed ~~in the EIR~~. G203-9

Also v. concerned abt the substantial impacts to marine mammals tair quality that will result from the propsd proj.

We will submit a more detailed version of these comments in writing. Thank you for your attention.

G203-7
As stated in Table 4.18-8, "[t]he State of California has adopted a general storm water permit covering nonpoint source discharges from certain industrial facilities and from construction sites involving more than one acre. The Construction General Permit requires preparation of a storm water pollution prevention plan (SWPPP) and implementation of best management practices (BMPs) to reduce the potential for pollutants (chemicals and sediment) to be discharged from the construction site to waters of the State."

As indicated, the Applicant would be required under permit to reduce the potential for pollutants to be discharged during construction. To minimize the potential release and migration of contaminants, the Applicant has incorporated erosion control during construction (AM TerrBio-1a). In addition, the following mitigation measures would minimize the potential release and migration of contaminants during construction: a drilling fluid release monitoring plan (MM WAT-3a), a strategic location for drilling fluids and cuttings pit (MM WAT-4a), monitoring of stream crossing during construction (MM WAT-4c), and backfilling, compaction, and grading following construction (MM GEO-1b).

G203-8
The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. A closed loop tempered water cooling system, which recirculates water, would be used instead of a seawater cooling system, except during annual maintenance (four days for the closed loop tempered water cooling system, and four days for the Moss tanks when the inert gas generator [IGG] would be operating).

Because seawater would only be used as non-contact cooling water during these maintenance activities, the volume of seawater used would be greatly reduced. Seawater would also be used for ballast. Section 2.2.2.4 describes the proposed seawater uptakes and uses for the FSRU. Appendix D5 describes seawater intakes and discharges during Project operations, and Appendix D6 describes the closed loop water system and provides thermal plume modeling analysis of discharges from the backup seawater cooling system.

When either the backup seawater cooling system or the IGG are operating, the temperature of the discharged seawater would be elevated above ambient temperatures no more than 20°F at the point of discharge and would be 1.39°F at 300 m from the point of discharge during the worst case scenario. These thermal

discharges would comply with the California Thermal Plan (see Sections 4.7.4 and 4.18.4 and Appendix D6).

G203-9
The Project has been modified since issuance of the March 2006 Revised Draft EIR. See Section 1.4.2 for a summary of Project changes. The Applicant has reduced the number of LNG carriers that would call on the FSRU annually from a maximum of 130 to a maximum of 99. As a result, the number of LNG carriers docking at the FSRU weekly would be reduced from an average of two to three per week to one to two per week. Since a crew vessel would meet each LNG carrier, the number of crew vessel trips to and from Port Hueneme would also change. See Section 4.3 for more information in this regard.

Section 2.1 contains information on the regulations that the LNG carriers must meet under Vessel Standards Certificates of Class including the International Convention for the Prevention of Pollution from Ships. Section 4.18.2 contains information on the regulations with which the Applicant would comply to treat, discharge, and/or dispose of wastes and wastewaters. Impact WAT-5a in Section 4.18.4 contains additional information on this topic.

Section 4.7.4 contains information on increases in marine traffic. Sections 4.7.2 and 4.7.4 contain additional information describing the regulatory requirements and mitigation measures designed to prevent and further reduce the potential of any oil spills in the marine environment and associated impacts on marine mammals and fish.

Section 4.6.1.3 contains a revised discussion of Project emissions from vessels and proposed control measures. Section 4.6.4 contains an updated analysis of impacts on air quality from the FSRU and Project vessels and mitigation measures to address potential impacts.